

IHO MASS PT S100 Gap Analysis

Member State/Organization Denmark – Danish Geodata Agency

S100 Standard Reviewed S-122 – Marine Protected Areas

Maturity of Standard Reasonably mature at V3.0 (issued 2019)

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Issue/Requirement (take from Spreadsheet)	Issue addressed?	More content?	Gap in standard?	Potential Solution/s	Ease to implement?
<p>MASS will require more geographical polygons to describe areas (such as speed restriction and constraints), with suitable attribution for MASS to interrogate and act appropriately. This information is often captured in text boxes, Sailing Directions or Pick Reports in natural language with very little geographic descriptors, making it impossible for MASS to interrogate, read and act upon. These could be created as instructional layers which are geographically location based containing attribution such as name of feature, type of feature, unique number, reason for speed restriction or constraint etc. in a machine-readable format.</p>	<p>✓</p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/></p>	<p>According to the specification, Marine Protected Areas are already made as polygons. For the polygons, information and restrictions can be selected from a predefined list, which will be machine readable, and it will be possible for MASS ships to interrogate and act upon.</p> <p>At this stage, the predefined lists seem complete. Whether some feature types or attributes will need be added is unknown. If this is the case, it is considered easy to implement.</p>	<p>Choose an item.</p>

IHO MASS PT S100 Gap Analysis

<p>The communication infrastructure necessary to sustain data exchange is not reliable and affordable today. Thought needs to be given to data packets sizes for data and updates for MASS.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>The data regarding Marine Protected Areas are mostly static. It is assessed that only small or minor data packages or exchange sets will be relevant for these areas. The current infrastructure will be sufficient for this.</p> <p>The assessment is written with thoughts on how the infrastructure is expected to be when S-100 is fully operational.</p>	<p>Choose an item.</p>
<p>MASS will require more frequent or real-time updates of the data contained in the S100 products, which should be pushed from official sources that the vessels can 'listen' out for and update their navigational database and products automatically irrespective of where they are in the world. Event driven data updates and near real time updates will be required for MASS as MASS will always need to be up to date.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Marine Protected Areas are mostly static data that not require real-time updates.</p>	<p>Choose an item.</p>

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Comments:

- Working times and schedules
 - For some MPAs different working times and schedules are effected. Working hours and schedules with different exceptions is already known as a challenge to programme regarding the fact it have to be machine readable. This challenge recurs to many other S100 specification, and a solution is being worked on at the moment.
- Reporting Requirements
 - In some MPAs, it is required to report to relevant authorities when certain events occur such as an animal strike or pollution event. It is assessed that this will not be possible for MASS degree 3 or 4 ships to note if such events should occur.
 - The specification gives the opportunity for mariners to send report information categorized as free text. Without knowing what this information may include, it will not be possible for MASS ships to send such free text reports. If such, unknown information is relevant and important, it will have to be converted into new feature classes and attributes.

MASS GAP analysis

- In conjunction with the issues and requirements spreadsheet, use the attached template and use one template per standard you are looking at (i.e. if you have 2, then you will create 2 forms).
- Enter the information at the top of the form to capture your country or organisation, the S100 standard you have assessed, the maturity of that standard and who is the chair of the standard WG or PT.
- Look at all of the issues captured and assess against your standard. I have suggested the appropriate standard per issue, but that is from my own understanding and I may have missed something, so please be thorough.
- Ensure you find out the current state of the standard/s you have been assigned, for example S101 is undergoing review, so I will ensure that UK speaks to the chair of the S101 PT to make sure that the latest version is assessed as the new changes may address some of the concerns.
- Ascertain if each issue or requirement from the spreadsheet, relevant for your standard is either met and no further action is needed, the standard caters for the issue but HOs may want to consider adding more content (example more land based contours) or is unmet and therefore there is a gap identified in the standards.
- Please have a go at suggesting a solution for the problem that will address the gap. Be as detailed as you can be, for example there is an issue with natural language text and it not being machine readable, but please don't put a simple statement that says "make all data machine readable". Our job is to help the respective WGs and PTs.
- Also use the pulldown to assess whether the solution you have identified is "Easy", "Moderately" or "Hard" to implement.